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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,634	12/13/2005	Cornelis Adrianus Henricus Antonius Mutsaers	NL 030673	6812
24737 7590 10/31/2007 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			EXAMINER RALEIGH, DONALD L	
			ART UNIT 4176	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/560,634

Applicant(s)

MUTSAERS, CORNELIS  
ADRIANUS HENRICUS AN

Examiner

Donald L. Raleigh

Art Unit

4176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 12/13/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Ghosh (US PGPub. 2001/0052752 A1).

Reference Claim 1:

Ghosh teaches:

A barrier laminate (Fig. 5) comprising barrier(21) and planarisation materials (Page 3 [0032] lines 3-4 teaches that this layer is a polymer. Page 4 [0037], lines 4-5 teaches that parylene is a preferred polymer and lines 6-8 teaches that Parylene helps cover defects and pinholes , i.e. constitutes a planarisation material).

characterized in that said barrier laminate (21 and parylene) contains at least one discontinuous layer of a planarisation material, which layer is divided into unconnected areas distributed along the plane.

Art Unit: 4176

(In Fig.5, the first barrier layer (21)(which contains parylene) is patterned to leave open portions of the substrate (unconnected), Page 3, [0032], lines 3-5)

Reference Claim 2:

Ghosh teaches:

Wherein said unconnected areas are separated by regions of a barrier material. (Fig.5 shows the unconnected areas of barrier material (21) exposing the substrate beneath. Therefore, the unconnected areas (exposed substrate) are separated by squares of barrier material.)

Reference Claim 3:

Ghosh teaches:

Wherein said planarisation material is an organic material.

(Page 3 [0032] lines 3-4 teach that the 1<sup>st</sup> encapsulation layer may be formed of a polymer. Page 4, [0037] teaches that parylene is a preferred polymer.

Art Unit: 4176

Page 4, [0037] lines 6-8 teaches that Parylene helps cover defects and pinholes , i.e. constitutes a planarisation material. Page 4 [0037]; chemical diagrams show that Parylene is organic (contains Carbon-Hydrogen bond (CH<sub>2</sub>))

Reference Claim 4:

Ghosh teaches:

Wherein said planarisation material is a combination of organic and inorganic materials.

(Page 4, [0037], chemical diagrams show that Parylene C & D contains Carbon-Hydrogen bonds (CH<sub>2</sub>) ,which is organic and Chlorine (Cl) which is inorganic.)

Reference Claim 5:

Ghosh teaches:

Wherein said barrier material is an inorganic material.

Art Unit: 4176

(Both of the layers (21) and (22) can be considered as barrier layers. The second encapsulation layer (22), Page 3 [0032], lines 15-16 is formed of an oxide layer. Page 4, [0036], lines 5-9 teaches that a suitable material would be  $\text{SiO}_2$ , which is inorganic.)

Reference Claim 6:

Ghosh teaches:

Wherein said regions of a barrier material (21) forms a checked pattern.

(Fig.5 shows a checked pattern of barrier layer (21) exposing parts of the substrate (2))

Reference Claim 7:

Ghosh teaches:

Further comprising at least one continuous layer of a barrier material.

(Page 3 [0032], lines 17-19 teaches that barrier layer (22) covers layer (21) and the substrate)

Reference Claim 8:

Ghosh teaches:

Wherein said discontinuous layer is arranged between two continuous layers of a barrier material.

(Page 3, [0028], lines 8-11 teaches that the top layer of the OLED stack is a barrier layer of ITO. Although, inventor does not specify that this layer is continuous across the

Art Unit: 4176

substrate; the substrate layer beneath the OLED stack is obviously continuous and presents a barrier layer sandwiching the 1<sup>st</sup> encapsulation layer (21) and the 2<sup>nd</sup> encapsulation layer(22)).

Reference Claim 9:

Ghosh teaches:

Further comprising at least one continuous layer of a planarisation material.

( Page.3, [0032], lines 23-32 teaches an optional arrangement of Fig.5 with a 3<sup>rd</sup> encapsulation layer (23) formed of a polymer that provides chemical protection. Page 4, [0037] teaches that parylene is a polymer that provides such protection. Additionally, Page 3 [0032], lines 31-32 teaches that an additional SiO<sub>2</sub> layer can be added on layer (23) and Page 4, [0037] teaches that these oxide layers need to be protected with parylene , which is a planarisation material.

Reference Claim 10:

Ghosh teaches:

Wherein said planarisation material is a polymeric material.

(Page 4 [0037] teaches that Parylene is a suitable polymer for the planarisation layer. (It covers defects and pinholes , which is what a planarisation material is used for.)

Art Unit: 4176

Reference Claim 11:

Ghosh teaches:

Wherein said planarisation material

is selected from the group consisting of parylene, acrylates, epoxides, urethanes, spin-on dielectrics, and siloxanes.

(Page 4 [0037], parylene)

Reference Claim 12

Ghosh teaches:

Wherein said barrier material is selected from the group consisting of are  $\text{SiO}_2$ ,  $\text{SiC}$ ,  $\text{Si}_3\text{N}_4$ ,  $\text{TiO}_2$ ,  $\text{HfO}_2$ ,  $\text{Y}_2\text{O}_3$ ,  $\text{Ta}_2\text{O}_3$ , and  $\text{Al}_2\text{O}_3$ .

(Page 4, [0036], lines 5-9, which is used for the 2<sup>nd</sup> encapsulation (barrier) layer (22) .

Page 3, [0032], lines 15-17)

Reference Claim 13:

Ghosh teaches:



Art Unit: 4176

Use of a barrier laminate as an oxygen and/or water impermeable film.

(Page 4, [0038], lines 1-3 teaches that Parylene C is low in oxygen permeability and moisture vapor transmission.)

Reference Claim 14 :

Ghosh teaches:

A method for the manufacture of a discontinuous layer (21)

in a barrier laminate (21 and parylene) comprising:

- depositing a continuous layer of a planarisation material,
- ( Page.3, [0032], lines 23-32 teaches an optional arrangement of Fig.5 with a 3<sup>rd</sup> encapsulation layer (23) formed of a polymer that provides chemical protection.

Page 4, [0037] teaches that parylene is a polymer that provides such protection.

Additionally, Page 3 [0032], lines 31-32 teaches that an additional SiO<sub>2</sub> layer can be added on layer (23) and Page 4, [0037] teaches that these oxide layers need

Art Unit: 4176

to be protected with parylene , which is a planarisation material.

removing regions of said layer of a planarisation material

- (Fig.5, shows portions of layer (21) removed to expose the substrate. Page 3, [0032], lines 3-6) and
- filling said regions with a barrier material.

- (Page 3 [0032], lines 17-19 teaches the 2<sup>nd</sup> encapsulation (barrier) layer (22)

completely covering the first barrier layer (21) and the exposed substrate., i.e.

filling in the exposed regions with barrier material)

Reference Claim 15:

Ghosh teaches:

A method for the manufacture of a discontinuous layer (Fig.5 (21))

in a barrier laminate (21 and parylene) comprising:

depositing a patterned layer of a planarisation material (parylene),

whereby regions where no planarisation material is deposited are

formed, (Fig.5 shows exposed regions of the substrate that layer (21) containing the parylene does not cover) and

- filling said regions with a barrier material.

Art Unit: 4176

- (Page 3 [0032], lines 17-19 teaches the 2<sup>nd</sup> encapsulation (barrier) layer (22) completely covering the first barrier layer (21) and the exposed substrate., i.e. filling in the exposed regions with barrier material)

Reference Claim 16:

Ghosh teaches:

Wherein said filling of said regions with a barrier material is performed simultaneously as the deposition of a continuous layer of a barrier material on said discontinuous layer. (The deposition of the 2<sup>nd</sup> barrier layer (22) would fill in the exposed regions and simultaneously create a continuous barrier layer across the entire substrate and OEL portions)

Reference Claim 17:

Ghosh teaches:

An electronic device, or more particular electroluminescent device (Pg.1, [0005] describes the light emitting luminescent layer device (OLED), having active layers and a barrier laminate (21 and parylene)) positioned over the active layers (page 1 [0005], describes the active OLED layer and [0012] teaches encapsulating the OLED with a barrier layer (21), the laminate (21 and parylene) having a discontinuous layer (Fig.5, shows discontinuous layer (21))

Art Unit: 4176

which is, among the layers of the laminate containing planarisation material

(Page 3 [0032] lines 3-4 teaches that layer (21) is a polymer. Page 4 [0037], lines 4-5 teaches that parylene is a preferred polymer and lines 6-8 teaches that parylene helps cover defects and pinholes , i.e. constitutes a planarisation material).

the one closest to the active layers of said electroluminescent device.

(Page 1 [0012], lines 1-5 teaches placing layer (21) over the organic light emitting diode (active layer))

### ***Conclusion***

Examiner's note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L. Raleigh whose telephone number is 571-270-3407. The examiner can normally be reached on Monday-Friday 7:30AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Nguyen can be reached on 571-272-2402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4176

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DLR

  
KIMBERLY D. NGUYEN  
PRIMARY EXAMINER  
10/29/07